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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Administration
Bureau of Entomology and Plant Quarantine
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U. S. DEPARTMENT OF AGRICULTURE

May 5, 1947

Summarized in the attached statement and tabulation are the results of the trap-scouting performed during the summer of 1946 to develop information on the distribution and degree of infestation of the Japanese beetle in localities outside the area regulated by Federal quarantine. Listed in the tabulation are all localities outside the regulated area where trap-scouting was carried on with positive results during the seasons 1937 to 1946, inclusive, with the respective trap collections; together with a list of localities where soil treatments have been applied at isolated infestations from 1944 to date.

Soil treating programs in 1946 largely paralleled in scope those of the previous year. Acreages completed, plus additional locations treated in Falconer, N. Y., and Archdale and High Point, N. C. in the spring of 1947, total 537.95 acres. These treatments were carried out with the cooperation of the interested States and municipalities. They are attempts to eradicate outlying incipient infestations or, if eradication is impracticable, to suppress the infestations so that they do not become new centers of spread.

Heretofore the standard soil treatment has comprised the application of lead arsenate at a dosage of 500 pounds per acre. This year DDT at the rate of 25 pounds per acre was approved as an equivalent of the larger dosage of lead arsenate. DDT was used in the soil treatments applied at Newark and Williamson, N. Y.; Calypso, Dunn and Mount Olive, N. C.; and for part of the acreages treated at Dahlonega, Ga.; St. Louis, Mo.; and Crozet, Va. Of the total acreage treated or scheduled for treatment as a result of 1946 catches, 217 acres or 40% of the total will receive DDT application. Material costs per acre during the past year approximated \$100.00 for lead arsenate compared to \$20 for the greatly reduced dosage of DDT.

Treatment is recommended within a radius of 300 feet of all collections of female beetles or multiple finds of either sex. Usually treatment is not applied in sections where solitary male beetles are captured, such areas being reserved for trapping the following season more accurately to determine the conditions of infestation.

Suppressive measures already applied or assured for the spring of 1947 in localities outside the regulated area, together with State quarantine action in certain outlying areas, will, in most instances, assure protection from spread at least comparable with that afforded if the Federal quarantine were extended. Immediate additions to the area regulated under the Federal Japanese beetle quarantine as a result of the season's trapping and survey records,

therefore, will probably be limited to the election district of Mechanicsville (No. 5), St. Marys County, Md.; town of Schroepel, Oswego County, and town of Waterloo, Seneca County, N. Y.; township of Marietta, Washington County, Ohio; district of Midlothian, Chesterfield County, Va.; and the districts of Gerards-town and Mill Creek, Berkeley County; districts of Blue Sulphur and Fort Spring, Greenbrier County; district of Wolf Creek, Monroe County; all of Morgan County; districts of Greenbrier and Talcott, Summers County; and districts of Parkersburg and Williams, Wood County, W. Va.

The necessity of holding a hearing or conference to consider the extension of the regulated area or modification of the regulations, prior to a revision of the quarantine regulations, can be avoided. It is expected that a revision of the regulations will be issued in the near future.

The accompanying report is similar to any report on current conditions that might be presented at a public conference. It is issued to make available to State plant quarantine officials and other interested parties the latest information on the distribution and status of the Japanese beetle in areas not now included under Federal quarantine and to acquaint them with the proposed revision of the regulations.

P. N. Annand
Chief of Bureau

Attachments

REPORT OF RESULTS OF JAPANESE BEETLE TRAPPING
AND CONTROL OPERATIONS DURING 1946

Fewer first-record collections of beetles were determined during 1946 than in any year since 1943. Beetles were collected for the first time in 23 communities, but at only one of these locations was the discovery of special significance.

In 1946 beetles were collected in 82 communities where they were found in 1945. This compares with 61 localities in the 1944 and 1945 seasons. However, this apparent carry-over of beetles is significant in only 23 cities and towns, as compared to 28 persisting infestations of importance in 1945.

This year's trapping program involved the use of 44,250 traps in 671 localities scattered throughout 40 States.

State-Federal cooperative soil treatments of important isolated infestations were continued by the States of Georgia, Illinois, Indiana, Michigan, Missouri, New York, North Carolina, Ohio and Virginia. These again involved the application of lead arsenate at the rate of 500 pounds per acre within a radius of approximately 300 feet of significant beetle finds. Fifty percent wettable DDT was applied at the rate of 25 pounds per acre in place of lead arsenate in New York and North Carolina and parts of the areas in Georgia, Missouri and Virginia. A few of the infestations were of such an extent that soil treating was not considered practicable. Quarantine action is contemplated in these instances.

Four beetles were collected in traps at two airfields in Florida. Three beetles were from the 20th and 36th Streets airport in Miami, and one at the Eglin Army airfield near Valpariso. Both of these finds are first records, although beetles have been collected in Miami in 1940 (2 beetles) and 1942 (1 beetle).

Soil treatment was completed in September at Dahlonega, Ga., where 245 beetles were collected. Four acres were treated with lead arsenate and 7.7 with 50% DDT. The other captures in the State were Atlanta, 17 beetles; Augusta, 3; and Austell, 2. It is planned to apply a DDT insecticide with a blower during the period of beetle flight in 1947 to the sections of Atlanta where beetles were collected.

The number of beetles trapped in Chicago, Ill. during 1946 was within one of the 1945 collection, 165 beetles being caught. Cooperative soil treatment using lead arsenate during the fall covered 61.6 acres. In Highland Park where 22 beetles were trapped, 10.3 acres were treated. The only other beetle captured in Illinois was in Lake Forest, a first record.

Two cities in Indiana applied lead arsenate soil treatment. Elkhart, where 25 beetles were collected, treated 15.35 acres and Indianapolis with 13 beetles treated 6 acres. The other finds in Indiana were Richmond 2 beetles, Hammond 1, Terre Haute 1, and Whiting 1.

A solitary beetle was trapped in Fort Madison, Iowa. One other beetle was caught there in 1938, but none was collected in 1939.

Beetles were collected at two localities in Maryland outside the regulated area. Ninety-two beetles were trapped at Mechanicsville and one at Oakland. Quarantine action is contemplated at Mechanicsville.

All localities in Michigan where beetles were collected, except Muskegon with one beetle, were treated with lead arsenate. Acreage treated in Detroit (12 beetles) 32.05, Grand Rapids (92 beetles) 77.65, Kalamazoo (10 beetles) 30.2, Melvindale (1 beetle) 2, River Rouge (15 beetles) 22.8, and Wyandotte, a first record, (1 beetle) 6 acres.

The number of beetles trapped in St. Louis, Mo. was 51 as compared with 7 in 1945. One beetle was collected at Bridgeton (St. Louis-Lambert Field). Lead arsenate and DDT were applied to 18.1 and 18.95 acres, respectively, in St. Louis, and lead arsenate to 0.9 acre at the St. Louis-Lambert Field.

A few beetles each were found at Bath, Hammondsport, Mexico, Niagara Falls, North Tonawanda, Plattsburg and Rouses Point, New York. Soil treatment using DDT was applied at Newark (16 beetles) 5.5 acres, and Williamson (17 beetles) 9.3 acres. Some 7 acres in Falconer where 93 beetles were trapped is to be treated with DDT during the spring of 1947. Phoenix with 325 beetles and Waterloo with 219 beetles, including Border City, which is generally infested, will be placed under Federal quarantine.

Of the 27 localities in North Carolina where beetles were trapped, soil treatments using DDT have been applied in three towns, Dunn (293 beetles) 40.2 acres, Calypso (929 beetles) 35.3 acres, and Mt. Olive (51 beetles) 23 acres. High Point (168 beetles) and Archdale (38 beetles) are to be treated with DDT during the spring of 1947, covering approximately 57 and 12 acres, respectively. Ten beetles were trapped at Fletcher for a first-record. At Blowing Rock the traps collected 22,235 beetles, about 50% of last year's catch. The Hendersonville area is under state quarantine and it is planned to apply a DDT insecticide with a blower in that section during the period of beetle flight in 1947. Similar treatment will also be applied at the Wilmington airport and the Calypso-Mt. Olive-Dunn area. In the other 17 localities in the State the number of beetles collected were from 1 to 12 beetles each. These locations will be rechecked during the 1947 season.

The number of beetles trapped in Ohio showed a considerable decrease from 1945 reports. In Painesville with 32 beetles, 20.6 acres were treated with lead arsenate. The township of Marietta, Washington County, has a light infestation and will be included under Federal quarantine. The 11 beetles in Belpre were trapped in treated area. In Geneva, Hamilton, Bucyrus, Kinsman and Maumee, 7,2,1,1,1 beetles were trapped respectively, the last two being first records.

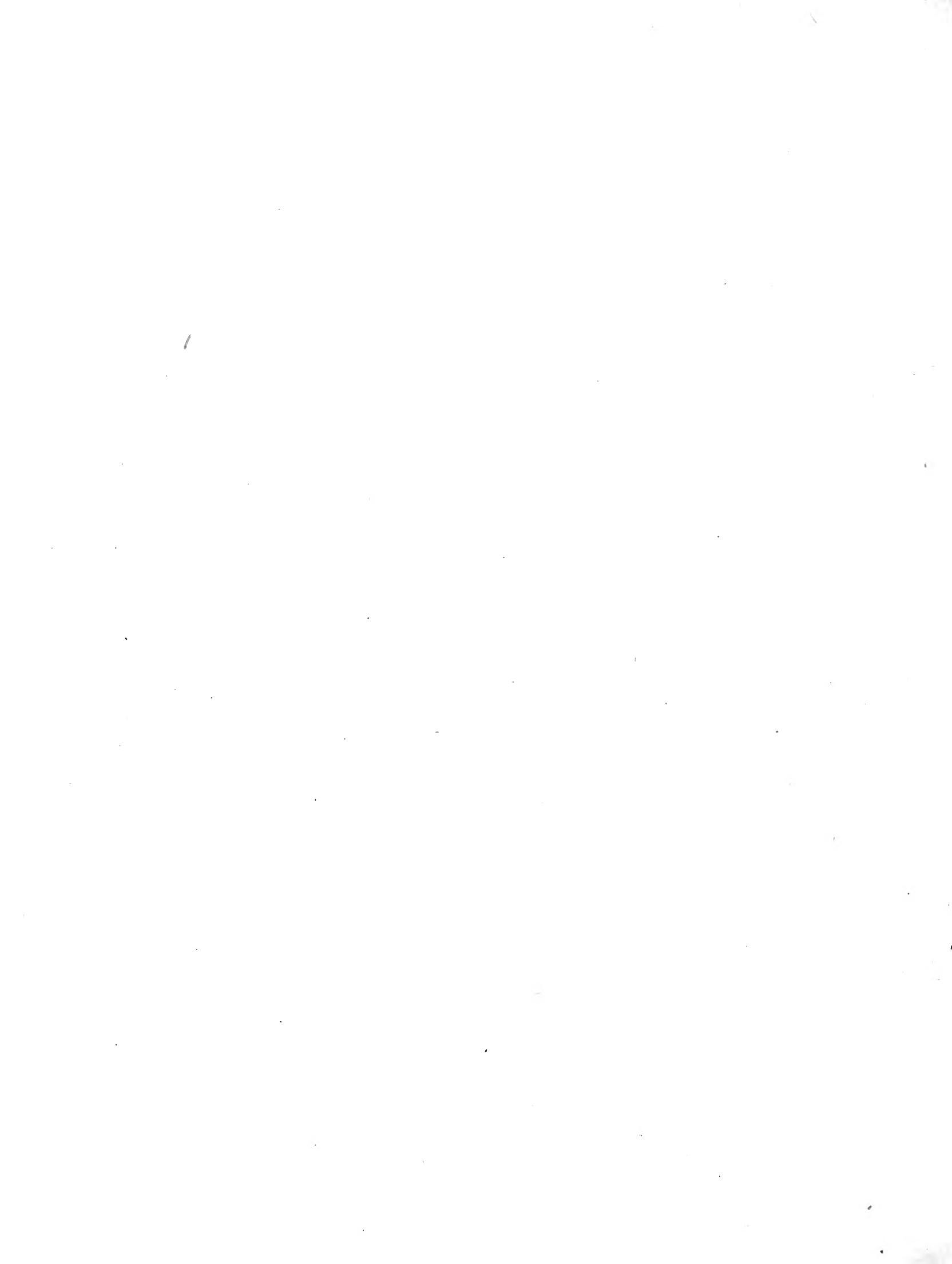
One beetle was caught at the Charleston, S. C. municipal airport. Six were trapped in Greenville and a first record find of six at the Greenville Army Airbase.

A single beetle was trapped at the Nashville, Tenn. Airport, a first record for this field. Two beetles were collected from the traps in Mountain City.

Virginia trapping resulted in 11 first records, most of them just south of the regulated area: Amherst 2 beetles, Barboursville 2, Bowling Green 2, Broadway 8, Crozet 9, Gordonsville 5, Lovingston 5, Madison 10, Marion 2, Port Royal 5 and Yorktown 4. Soil treatment using lead arsenate was applied in Covington covering 9.2 acres and in Crozet covering 4 acres with lead arsenate and 1.25 acres with DDT. In 8 other towns 1 to 9 beetles were trapped. Midlothian district, Chesterfield County, is generally infested and will be placed under Federal quarantine.

Most important of the 8 infestations in West Virginia was that at Alderson where over 3300 beetles were collected. Alderson, along with Petersburg 23 beetles, Romney 6 beetles and Ronceverte 1 beetle were first records. Other beetle collections were Elkins 12, Gassaway 10, Pennsboro 1, and St. Marys 2. Considerable territory has already been placed under State quarantine as a result of these finds. Federal quarantine extension will parallel that of the state.

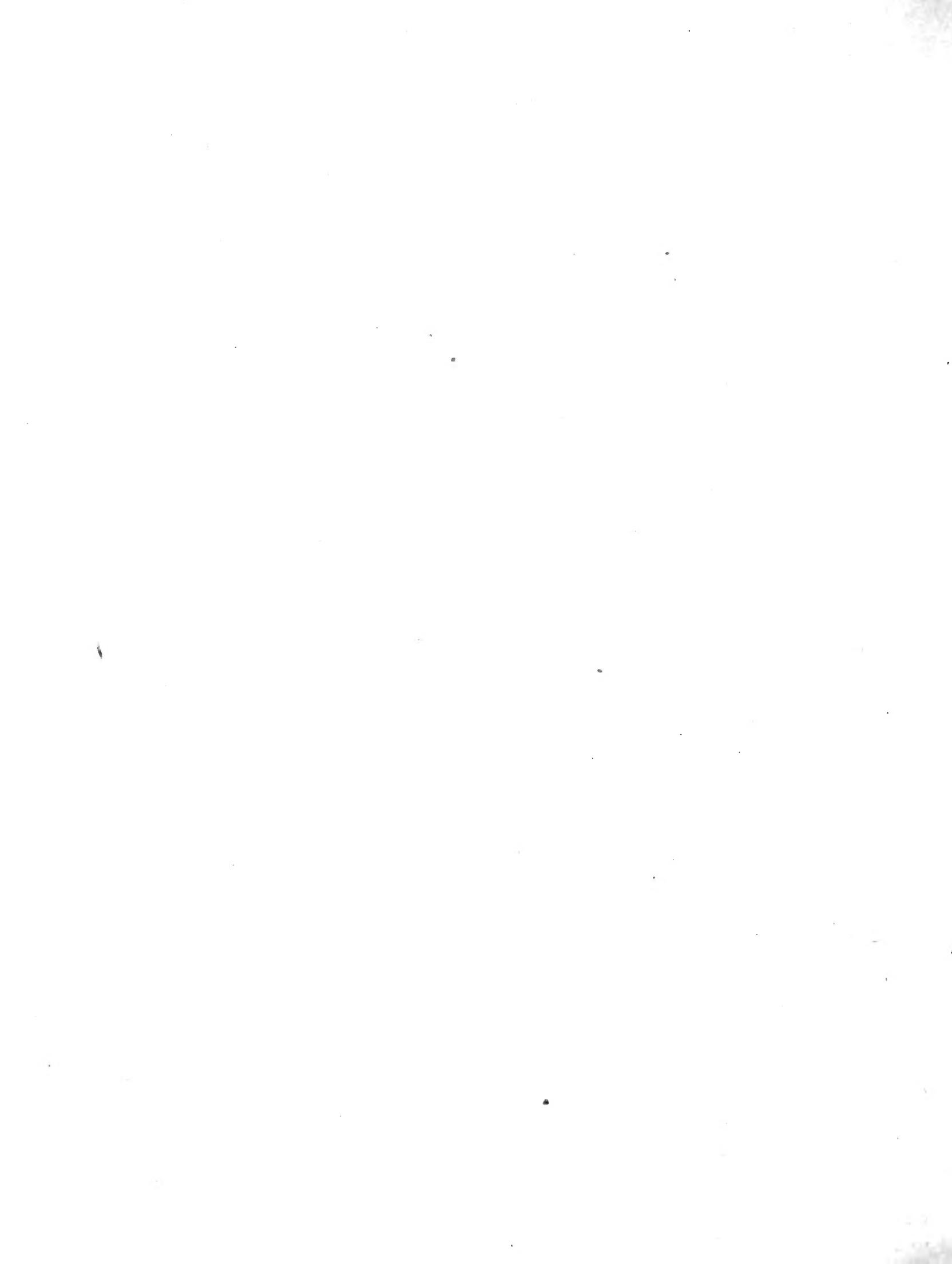
Trapping was performed at 152 airfields in 36 States. Fifty of these fields in 20 States were trapped in connection with our regular program. A co-operative program with other Bureau divisional field stations included the operation of traps at 18 airfields in 9 States. Forty-four airfields in 9 States were trapped by cooperating State plant pest officials. Under a special Army program, 93 units of 8 traps each were forwarded to various Army airfields. Reports indicate that traps were set on 40 Army airfields in 17 States. Beetles were collected at only 7 of the airfields trapped, six of these in the Southern States and one in the mid-West. Solitary beetles were trapped at St. Louis-Lambert Field, Mo.; Eglin Army Airfield, Valparaiso, Fla.; Charleston (S. C.) Municipal Airport, and Nashville (Tenn.) Airport. Trapping at a Miami (Fla.) Airport resulted in the collection of three beetles. Six beetles were captured at the Greenville (S. C.) Army Air Base, and 22 beetles were trapped at the Wilmington (N. C.) Airport. This was the first time beetles had been trapped at Eglin Army Airfield, Valparaiso, Fla., Wilmington, N. C. and Nashville, Tenn. airports, and Greenville, S. C. Army Airbase.





JAPANESE BEETLE
trap finds outside the
regulated area.
1946

1946



JAPANESE BEETLE TRAPPING
OUTSIDE PRESENT REGULATED AREA
1937 - 1946

POSITIVE RESULTS

* First Record

JAPANESE BEETLE TRAPPING

1937 - 1946

NORTH CAROLINA

*First Record

JAPANESE BEETLE TRAPPING

1937 - 1946

*First Record

JAPANESE BEETLE TRAPPING

1937 - 1946

Location	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937
	Traps	J.B.								
VIRGINIA (continued)										
New Market	-	-	-	25	0	-	45	2	14	0
Orange	25	4	-	-	-	-	8	0	-	25
*Port Royal	25	5	-	-	-	-	-	-	0	30
Rappahannock Academy	25	-	-	-	-	-	-	-	-	-
Rocky Mount	25	10	2	-	-	-	-	-	-	-
Salem	-	-	-	-	-	87	3	-	-	-
Shenandoah	-	150	1656	50	0	-	-	-	-	-
South Hill	25	0	-	100	0	200	6	92	0	-
Staunton	-	-	-	-	-	-	-	-	-	-
Stephens City	-	15	0	-	-	-	-	24	0	-
Strasburg	-	20	0	-	-	-	-	13	0	-
Timberville	25	0	-	-	-	-	-	-	10	-
Unionville	-	-	-	-	-	-	-	-	-	-
Warsaw	25	0	-	100	2	-	-	-	-	-
Waynesboro	-	-	-	100	3	200	10	-	-	-
Williamsburg	25	0	-	100	1	100	19	160	7	-
Woodstock	-	-	-	50	0	100	97	67	9	-
Wytheville	-	45	4	-	-	-	-	4	25	-
*Yorktown	25	4	-	-	-	-	-	-	-	-
WEST VIRGINIA										
*Alderson	75	3348	-	-	-	-	-	-	-	-
Beckley	25	0	-	-	-	100	10	-	-	-
Bluefield	25	0	-	-	-	100	9	-	-	-
Elkins	25	12	-	-	-	-	99	3	-	-
Gassaway	22	10	20	3	-	-	-	-	70	2
Huntington	50	0	298	5	-	200	4	-	-	-
Pennsboro	25	1	-	-	-	-	98	9	19	4
*Petersburg	25	23	-	-	-	-	-	-	-	-
*Romney	25	6	-	-	-	-	-	-	-	-
*Ronceverte	25	1	-	-	-	-	-	-	-	-
St. Albans	-	40	0	100	0	-	23	1	-	-
St. Marys	25	2	-	-	100	8	-	30	0	25
								1	-	-
								-	40	0

*First Record

COOPERATIVE STATE-FEDERAL SOIL TREATMENTS FOR JAPANESE BEETLE CONTROL

AT ISOLATED INFESTATIONS

1944 - 1946

State and City	Japanese Beetles	Soil Treatments		Japanese Beetles	Soil Treatments		Japanese Beetles	Soil Treatments	
	Trapped 1944 (Number)	Fall 1944 and Spring 1945 (Acres)	Trapped 1945 (Number)	Fall 1945 and Spring 1946 (Acres)	Trapped 1946 (Number)	Fall 1946 or Proposed for Spring 1947 (Acres)			
FLORIDA									
Jacksonville	5	7.5	0	-	-	-			
GEORGIA									
Atlanta	17	1.35	13	4.6	17	-			
Dahlonega	-	-	37	2.7	245	0	11.7	-	
Toccoa	17	1.35	1	-	-	-			
ILLINOIS									
Chicago	708	223.25	164	62.45	165	61.6			
Highland Park	10	-	5	-	22	10.3			
INDIANA									
Elkhart	35	37.6	21	19.2	25	-	15.35	-	
Fort Wayne	96	71.55	-	-	0	-			
Hammond	54	56.15	0	-	1	-			
Indianapolis	20	23.4	3	-	13	6.	-		
Logansport	7	4.3	0	-	-	-			
MICHIGAN									
Detroit	95	48.3	24	25.05	12	32.05			
Flint	11	8.3	0	-	0	-			
Grand Rapids	-	-	166	80.0	92	77.65			
Kalamazoo	-	-	63	29.9	10	30.2	-		
Melvindale	0	-	1	-	1	2.	-		
Muskegon	-	-	7	10.1	-	-			
River Rouge	42	32.6	278	32.05	15	22.8	-		
#Wyandotte	-	-	-	-	1	6.	-		
MISSOURI									
Bridgeton (St. Louis Lambert Field)	-	-	-	-	1	0.9			
Kansas City (Airport)	1	1.58	-	-	0	-			
St. Louis	4	1.91	7	7.7	51	37.05			
NEW YORK									
Fairport	-	-	54	7.0	93	7.	(T)	-	
Falconer	-	-	10	-	-	-			
Geneva	197	44.0	94	25.65	-	-			
Jamestown	31	-	7	8.3	-	-			
Newark	7	11.33	-	-	16	5.5	-		
Niagara Falls	20	-	-	21.5	3	-			
Williamson	31	10.5	-	-	17	9.3	-		
NORTH CAROLINA									
Archdale	-	-	6	-	38	12.0	(T)	-	
Burgaw	22	8.8	5	-	12	-			
Calypso	1	-	-	-	929	35.3	-		
Dunn	222	35.3	-	-	293	40.2	-		
Durham	-	-	47	13.2	-	-			
Elizabeth City	72	3.7	-	-	4	-			
Gastonia	60	15.4	-	-	-	-			
High Point	26	10.6	-	-	168	57.0	(T)	-	
Lenoir	4	3.0	-	-	1	-			
Lexington	2	1.2	-	-	0	-			
Mount Olive	2	-	4	-	51	23.0	-		
Raleigh	35	8.1	-	-	-	-			
Rocky Mount	-	-	5	2.4	9	-			
Salisbury	88	9.3	28	13.0	-	-			
Spencer	63	6.0	41	6.9	-	-			
Spruce Pine	6	2.3	-	-	0	-			
Warsaw	10	4.3	-	-	3	-			
Wilson	3	-	8	2.7	-	-			
Winston-Salem	-	-	7	6.4	-	-			
OHIO									
Ashland	23	21.7	1	-	0	-			
Belleview	39	32.7	84	28.5	-	-			
Belpre	82	31.12	32	-	11	-			
Cincinnati (Lunken Airport)	5	10.2	0	-	-	-			
Crestline	27	52.7	11	7.7	-	-			
Elyria	7	14.0	8	20.4	-	-			
Gallipolis	12	23.18	40	8.7	-	-			
Geneva	8	5.8	54	1.9	7	-			
Lorain	9	17.5	2	2.1	-	-			
Loudonville	-	-	3	3.15	-	-			
Marion	17	34.1	0	-	-	-			
New Concord	30	18.0	26	11.1	-	-			
Painesville (Lake County)	7	12.7	11	12.0	32	-	20.6	-	
South Zanesville	4	-	4	12.4	-	-			
Van Wert	1	4.35	0	-	-	-			
Willard	3	12.63	5	16.6	-	-			
TENNESSEE									
Mountain City	6	1.75	-	-	2	-	-		
VIRGINIA									
Alta Vista	-	-	9	7.7	-	-			
Clifton Forge	-	-	16	6.0	-	-			
Covington	-	-	83	13.0	-	-			
#Crozet	-	-	4	4.2	9	5.25	-		
Wytheville	-	-	-	-	-	-			

STATE SUMMARY OF SOIL TREATMENTS

State	Fall 1944 and Spring 1945	Fall 1945 and Spring 1946	Fall 1946 or Planned for Spring 1947
Florida	7.5	7.3	11.7
Georgia	2.7	-	-
Illinois	223.25	62.45	71.9
Indiana	193.00	19.2	21.35
Michigan	89.2	17.1	170.7
Missouri	5.49	7.7	37.95
New York	65.83	62.45	21.8
North Carolina	108.0	44.6	167.5
Ohio	290.68	132.55	20.6
Tennessee	1.75	-	-
Virginia	-	30.9	14.45
	985.40	544.25	537.95

First Record
(T) Soil treating planned for Spring 1947; all other soil treatments listed have been completed.

